



Sentinel 310 Fuel Oil Cleaner

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 02/27/2018

Supersedes: All previous versions

Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Sentinel 310 Fuel Oil Cleaner

Product form : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Clean up of fuel oil residues

1.3. Details of the supplier of the safety data sheet

Sentinel Products Inc.
8901 Wyoming Avenue North
Brooklyn Park, MN 55445
Phone: (763) 571-0630
Toll-free: (800)-373-0633
www.senpro.com

1.4. Emergency telephone number

Emergency number : 1-866-359-5661

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flammable Liquid Category 4	H227
Skin Sensitization Category 1	H317
Skin Irritation Category 2	H315
Eye Damage/Irritation Category 1	H318
Chronic Aquatic Toxicity Category 2	H411

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H227 - Combustible liquid
H317 - May cause an allergic skin reaction
H315 - Causes skin irritation
H318 - Causes serious eye damager
H411 - Toxic to aquatic life with long lasting effects
P210 - Keep away from heat, open flames, sparks. - No smoking
P261 - Avoid breathing vapors/mist/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves
P303+P352 - IF ON SKIN: Wash with plenty of soap and water.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P273 - Avoid release to the environment.
P391 - Collect spillage.
P370+P378 - In case of fire: Use dry chemical, foam, CO2 for extinction
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to licensed waste handling facility

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Water	(CAS No) 7732-18-5	Proprietary*
d-Limonene	(CAS No) 5989-27-5	Proprietary*
Benzenesulfonic Acid, C10-16 alkyl derivs.	(CAS No) 68584-22-5	Proprietary*
2-(2-butoxyethoxy)ethanol	(CAS No) 112-34-5	Proprietary*
Surfactant	(CAS No) Proprietary*	Proprietary*

*The exact product identification and/or percentage of composition has been withheld as a trade secret

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : IF INHALED: If breathing difficulties, dizziness, or light headedness occur when working in areas with high vapor concentration, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If breathing stops, begin artificial respiration and seek immediate medical attention.
- First-aid measures after skin contact : IF ON SKIN: Remove contaminated clothing. Immediately rinse with plenty of mild soap and water (for at least 15 minutes). If skin irritation occurs, get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation occurs, get medical advice/attention.
- First-aid measures after ingestion : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May be fatal if swallowed and enters airways.
- Symptoms/injuries after inhalation : Inhalation of excessive concentration of vapors or mists may cause irritation of the upper respiratory tract. Excessive inhalation of vapors may cause dizziness.
- Symptoms/injuries after skin contact : Contact may cause irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying or cracking of the skin or dermatitis. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.
- Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating. May cause burning, tearing or redness.
- Symptoms/injuries after ingestion : Ingestion may cause irritation of the digestive tract. Long term exposure to these compounds may cause kidney and liver damage.
- Chronic symptoms : No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical. Carbon dioxide. Foam.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : This material is an NFPA IIIA combustible liquid.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep upwind. Ventilate area. Keep all sources of ignition and hot metal surfaces away from spill. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

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Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Foam may be used to suppress vapors.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mists. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

d-Limonene (5989-27-5)	
Remark (ACGIH)	OELs not established
Remark (US OSHA)	OELs not established

Benzenesulfonic Acid, C10-16 alkyl derivs. (68584-22-5)	
Remark (ACGIH)	OELs not established
Remark (US OSHA)	OELs not established

2-(2-butoxyethoxy)ethanol (112-34-5)	
Remark (ACGIH)	TWA - 10 ppm
Remark (US OSHA)	OELs not established

Surfactant (Proprietary)	
Remark (ACGIH)	OELs not established
Remark (US OSHA)	OELs not established

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Respiratory protection of the dependent type.



Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.

Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

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Skin and body protection	: It is suggested a source of clean water be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.
Respiratory protection	: An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear
Color	: None to amber
Odor	: Orange Citrus
Odor Threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 61 °C (142 °F) Note: Minimum. Method: PMCC
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Heavier than air.
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Sparks. Heat. Open flame.

10.5. Incompatible materials

Avoid contact with : Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition generates : Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

d-Limonene (5989-27-5)	
LD50 oral rat	> 2 g/kg
LD50 dermal rabbit	> 5 g/kg

Benzenesulfonic Acid, C10-16 alkyl derivs. (68584-22-5)	
LD50 oral rat	> 1400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

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2-(2-butoxyethoxy)ethanol (112-34-5)	
LD50 oral rat	> 4500 mg/kg
LD50 dermal rabbit	> 2500 mg/kg

Surfactant (Proprietary)	
LD50 oral rat	> 1300 mg/kg
LD50 dermal rabbit	> 2 g/kg

Skin corrosion/irritation	: Causes skin irritation
Serious eye damage/irritation	: Causes serious eye damage
Respiratory or skin sensitization	: May cause an allergic skin reaction
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/injuries after inhalation	: Inhalation of excessive concentration of vapors or mists may cause irritation of the upper respiratory tract. Excessive inhalation of vapors may cause dizziness.
Symptoms/injuries after skin contact	: Contact may cause irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying or cracking of the skin or dermatitis. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating. May cause burning, tearing or redness.
Symptoms/injuries after ingestion	: Ingestion may cause irritation of the digestive tract. Long term exposure to these compounds may cause kidney and liver damage.
Chronic symptoms	: No data available.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : Cleaning Compound

Department of Transportation (DOT) Hazard Classes : Not Regulated

Other information : Not regulated in pkg. of less than 119 gal.

Transport by sea

No additional information available

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Air transport

No additional information available

In accordance with ADR / RID / IMDG / IATA / ADN

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard
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Benzenesulfonic Acid, C10-16 alkyl derivs. (68584-22-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-(2-butoxyethoxy)ethanol (112-34-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Surfactant (Proprietary)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Benzenesulfonic Acid, C10-16 alkyl derivs. (68584-22-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

2-(2-butoxyethoxy)ethanol (112-34-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Surfactant (Proprietary)

Listed on the Canadian DSL (Domestic Substances List) inventory.

No additional information available

15.2.2. National regulations

Benzenesulfonic Acid, C10-16 alkyl derivs. (68584-22-5)

Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on the Philippines CCS (Chemicals & Chemical Substances) inventory.

2-(2-butoxyethoxy)ethanol (112-34-5)

Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on the Philippines CCS (Chemicals & Chemical Substances) inventory.

Surfactant (Proprietary)

Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on the Philippines CCS (Chemicals & Chemical Substances) inventory.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

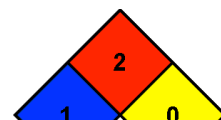
SECTION 16: Other information

Indication of changes : Revision 1.1 – 27 February 2018 - Section 2 Updated

Other information : Author. KAD

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.



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NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,
and are not reactive with water.

HMIS III Rating

Health : 1

Flammability : 2

Physical : 0

Personal Protection :

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